

**Abstract:**

Disclosed are methods for thawing frozen biopharmaceutical solutions including providing a container that contains a biopharmaceutical solution, at least a portion of the biopharmaceutical solution being frozen, providing an oscillatory driver coupled to the  
5 biopharmaceutical solution; providing a heat flux into the biopharmaceutical solution; and inducing oscillatory motion of the biopharmaceutical solution via oscillatory motion of the oscillatory driver to accelerate thawing, compared to motionless thawing, of the portion of the biopharmaceutical solution that is frozen. Also disclosed are devices for thawing frozen biopharmaceutical solutions.